

REMARKS

In response to the 02/10/06 Office Action, applicant submits the following remarks.

1) Drawings: The Examiner objected to the drawings as not showing the claimed tilt angle. Applicant has amended the claims to recite the tilt angle " θ_c " which is seen in Figure 2d. Applicant believes this amendment resolves the objections to the drawings.

2) Title: As requested by the Examiner, the title of the invention has been amended.

3) Objection to Claims 3-14, 18: Applicant has amended the referenced claims to provide an antecedent basis for the terms "first portion" and "second portion."

4) 35 USC §112 Rejections: Regarding the Examiner's first rejection, applicant believes the amendments have clarified that the tilt angle is the compound angle " θ_c ". Regarding the Examiner's second rejection, applicant has included the limitation of claim 3 (a tilt angle θ_c of less than 12°) into claim 1. Applicant submits that this renders the claim more definite and addresses the Examiner's concern that all display tiles would inherently meet the formulaic identity of claim 1 in having a tilt angle of between 0° and 360° . Finally, applicant is uncertain as to the basis of the Examiner's rejections of claims 3, 7, and 8. Applicant submits providing that an angle is between 0° and one of 12° , 3.5° , and 3° is sufficiently enabling, particularly where the specification discloses a preferred embodiment has an angle of 3.2 (see page 8, line 10). Applicant understands these numbers to specifically provide the "upper limit" (or more precisely, a series of alternative upper limits) which the Examiner asserts is lacking. Applicant suggests it has overcome all the §112 rejections. Additionally, applicant understands from a May 23, 2006 telephone interview that the Examiner will be withdrawing the §112 rejections and if another office action issues, it will be nonfinal.

5) 35 USC §102 Rejections: The Office Action rejected claims 1-2, 4-6, 9-12, 16-23, and 27 as being anticipated by US 2002/0118320 A1 to Bayrle. The Office Action asserted that Bayrle discloses "an organic light emitting device (OLED, 30 of Fig. 5;

[0027]-[0028]) material with a plurality of separately addressable pixel elements (individually controllable pixels 12, Fig. 2).” Applicant respectfully submits that this is an incorrect reading of Bayrle. When Bayrle discusses OLEDs at paragraphs [0027] to [0028], there is no indication that the OLEDs are separately addressable. Bayrle’s
5 OLEDs are illumination elements 30 which simply act to compensate for the shadowing produced by the backlight 24 being blocked by the opaque control circuit in the first edge zone 4 (see paragraph [0026]). This does not suggest the OLEDs are separately addressable. Likewise, Bayrle’s reference to individually controllable pixels 12 in Figure 2 is clearly discussing the pixels in the LCD portion of the display module 2, not
10 the illumination elements 30. As seen in Figure 4, there is no reason to have illumination elements 30 be addressable because illumination elements 30 are covered with a portion of the neighboring LCD screen (which does have addressable LCD pixels). Illumination elements 30 simply provide backlighting that would otherwise be blocked by the opaque control circuit. There is absolutely no indication that Bayrle’s
15 OLED elements are separately addressable. Thus, Bayrle cannot anticipate original claim 1.

Additionally, the Office Action’s reliance on MPEP §2112 is misplaced. MPEP §2112 provides in part that “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the
20 determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art” (emphasis in the original). Likewise, MPEP §2112.01 provides that “the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product.” The Office Action provided no “basis in fact and/or technical reasoning”
25 showing that Bayrle’s OLEDs necessarily are separately addressable. Similarly, the fact that Bayrle’s OLEDs are covered by the neighboring LCD screen very much shows that Bayrle’s OLEDs are not *necessarily* (and in fact are almost certainly not) separately addressable. In this instance, the Examiner cannot carry her burden of proof by employing MPEP §2112.

The Office Action also asserted that Bayrle teaches a compound angle having a “horizontal tilt angle” as recited in original claim 2 (now written in independent form) and referenced Figure 7 of Bayrle. However, applicant suggests this is an incorrect assumption. Viewing the Bayrle Figure 7, it is clear that Bayrle only discloses what applicant has defined as a vertical tilt angle (θ_v). Nowhere does Bayrle disclose that its panels also have the a positive horizontal tilt angle (θ_h) as clearly shown in Figure 2d and described on page 8, lines 10-23 of applicant’s disclosure. In other words, not only does the claimed display region have an angle running from top to bottom along its left edge (θ_v), but also an angle running from left to right along its top edge (θ_h)¹. Nothing in Bayrle discloses this combination of a vertical tilt angle in combination with a horizontal tilt angle. Thus claim 1 is necessarily novel over Bayrle. Likewise, applicant has included the horizontal tilt angle limitation in independent claim 28.

In a similar manner, new claim 29 also recites positive horizontal and vertical angles. However, claim 29 further recites that the OLED elements form an overlapping array. This is another feature which is clearly not disclosed in Bayrle. In Bayrle, the only purpose of the OLED elements are to act as illuminating elements in the interstitial space formed between neighboring LCD-display modules (see paragraphs 0005 and 0006 of Bayrle). Therefore, Bayrle’s OLED elements are only placed at points where the LCD-display modules overlap. In no manner does Bayrle actually over lap the *OLED elements themselves*. Thus claim 29 is clearly novel.

5) 35 USC §103 Rejections: The Office Action also rejected claims 1-2, 4-6, 9-12, 16-23, and 27 in the alternative as being obvious in view of US 2002/0118320 A1 to Bayrle. In regards to claim 1, the Office Action does not establish a prima facie case of obviousness. Since Bayrle fails to disclose OLED material with separately addressable pixel elements, the Examiner must find the suggestion to make Bayrle’s OLEDs separately addressable either in the references themselves or in the knowledge generally available to one of ordinary skill in the art (MPEP § 706.02(j)). The Office Action has not pointed out any reference suggesting Bayrle’s OLEDs should be made separately

¹ Of course, θ_v and θ_h could run bottom to top or right to left or any combination thereof.

addressable. Nor does the Office Action offer any explanation as to why this modification would be suggested by the knowledge generally available in the art. Clearly the Office Action has not stated a prima facie case of obviousness in regards to claim 1.

5 Furthermore, because Baryle employs LCD technology to form its pixel elements, a person of ordinary skill in the art would not attempt to modify the Baryle display to include any type of horizontal tilt angle. LCDs do not transmit light equally for all horizontal and vertical view angles (unlike OLEDs which provide a largely uniform emission over the OLEDs hemispherical profile). As the angle from which an
10 LCD is viewed deviates significantly from straight-center (i.e., perpendicular to the plane of the LCD screen), the clarity of the image will tend to degrade. If an LCD display had a horizontal tilt angle as claimed by the present applicant, the clarity viewed from one horizontal angle would be significantly worse than when viewed from the opposite horizontal angle. This is of particular concern when the LCD panel is used in
15 locations such as airports (which is a specific used mentioned in Bayrle) where the panel will be viewed from a wide range of horizontal angles.


 While Baryle does have a vertical tilt angle, the location of the viewer does not affect the clarity of the Baryle display from the vertical standpoint. For example, when Bayrle's LCD panel is used in an airport, it will be positioned well above the heads of
20 viewers with the tilt angle being oriented downward as seen in Figure 7A of Bayrle. The vertical angle of view will not change significantly depending on the location of the viewer and the viewer will never be looking down on the Bayrle display (the view from which the vertical tilt angle would most distort the clarity of the display). However, this is certainly not the case if a horizontal tilt angle is added to Bayrle. In an airport, it can
25 be expected that the display will be viewed from many different horizontal angles. If the horizontal angle of view is from the side of the display which has the raised edges, the display clarity will be significantly less than the same horizontal angle of view on the opposite side of the display. Thus, no person of skill in the art would modify Bayrle by providing a horizontal tilt angle to Bayrle's LCD panels because such a modification

would produce a display with a glaring defect.

The same problem does not exist when OLEDs are employed as in the present invention. Because OLEDs emit light equally across their entire hemispherical surface, a slight horizontal tilt to the OLED covered panels does not visibly affect the clarity when viewed from one side or another. For all of the reasons given above, applicant asserts that Bayrle would never be modified in the manner necessary to achieve the claimed invention and therefore cannot render the claimed invention obvious.

RESPECTFULLY SUBMITTED:

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